- **Introduction**   **J. Henegar**
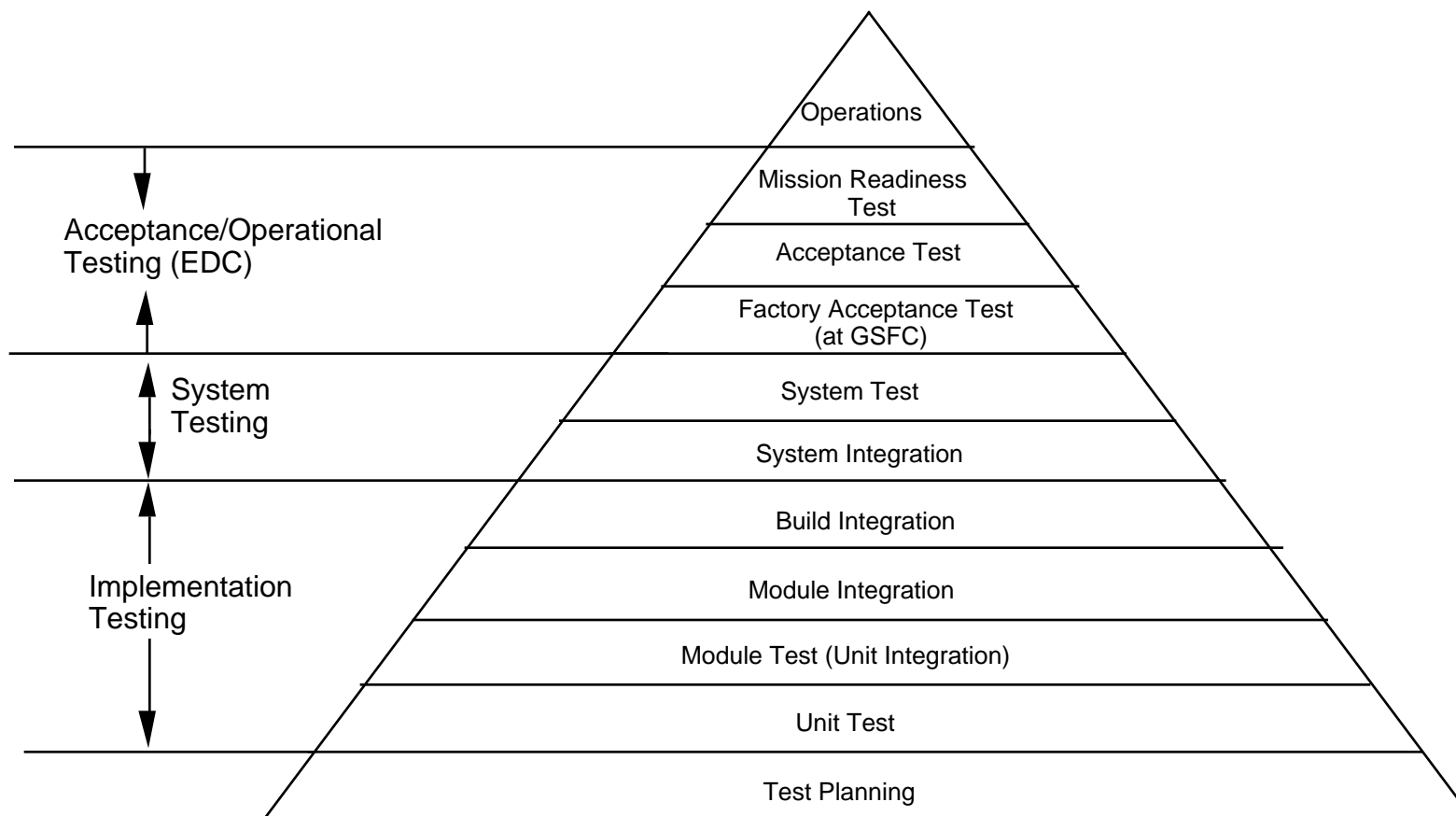
- **Design Overview**   **R. Schweiss**
  T. Aslam

- **LPS Hardware Architecture**   **C. Brambora**

- **LPS Operational Scenarios**   **R. Schweiss**

- **SWCI Detailed Design**   **J. Hosler**
  D. Crehan

- **System Testing**   **J. Henegar**

  System Test Objective and Products
  Configuration Control Activities
  System Test Acitivities
  System Test Tools

- **Acceptance Testing**   **EDC**

- **Facilities**   **EDC**

- **Conclusion**   **J. Henegar**

Operations

Mission Readiness Test

Acceptance Test

Factory Acceptance Test (at GSFC)

System Test

System Integration

Build Integration

Module Integration

Module Test (Unit Integration)

Unit Test

Test Planning

Acceptance/Operational Testing (EDC)

System Testing

Implementation Testing
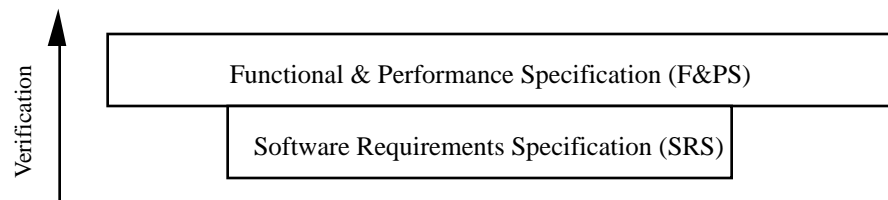
- **Verify that the LPS satisfies the LPS System and Software requirements according to the baselined documentation using requirement verification matrix**

    - **LPS Functional and Performance Specification (F&PS)**
    - **LPS Software Requirements Specification (SRS)**

Verification ↑

Functional & Performance Specification (F&PS)

Software Requirements Specification (SRS)

Traceability

- **Utilizing the Requirements and Traceability Management (RTM) tool to map each system test case to the requirement(s) it is designed to verify.**

- **Ties directly into the CADRE case tool being used for data flow diagrams and structure chart generation**

- **LPS System Integration and Test Plan**
  - **Documents the plan and requirements for the Development Verification and Validation**

- **System Test Procedures**
  - **Contains detailed procedures for each build test, generated 2 months before beginning of each build system test**

- **Test Procedures Walkthrough**
  - **Conducted 6 weeks before beginning of each build test, insures that the proposed test procedures adequately describe the operation of the system and verify the system requirements implemented for the current build.**

- **System Test Readiness Review**
  - **Conducted 1 month before beginning of each build test to ascertain readiness of software and system test activities**

- **System Test Reports**
  - **Test summary reports are generated within 2 weeks of completion of each build test**

- **Maintain configured test tool library**

- **Maintain test data catalog**

- **Document each test environment (i.e., hardware elements and software versions) via a checklist audit prior to the start of a test period.**

- **Establish and maintain software and hardware baseline**

- **Provide cleanup and maintenance of the test environment after each build test**

- **Receive software turnover from the development group, promote units to the test environment, build the system executables and copy them to the test environment**

- **Prepare software delivery packages**

System Test Activities

System Test Activities	Status
Insure testability of System Requirements	**Complete**
Insure testability of Software Requirements	**Complete**
Modify Generic Telemetry Sim. for L7 formats	**Complete**
Develop System Integration and Test Plan	**Complete**
Performance Verification Plan	
Test Data Requirements	
Test Tool Identification	
Establish Test Schedule	
Develop Necessary Test Tools	**In Progress**
Develop System Test Procedures	**For each build**
Create Test Scenarios	
Generate Test Data Sets	
Verify Test Tools	
Develop detailed test schedule per build	
Conduct System Test Readiness Reviews	**For each build**
Integrate System Components	**For each build**
Execute System Tests	**For each build**
Generate Test Summary Reports	**For each build**

TOOL	RESOURCE	STATUS
GTSIM	GFE	L7 Formats availabile*
LGS Simulator	GFE	Complete
LP DAAC Simulator	SEAS	Substantial Reuse from DDF SIM
Input Data Dump	SEAS/COTS	In Progress
Image Data File Dump	SEAS/COTS	Build 2
Cal Data File Dump	SEAS/COTS	Build 2
MSCD File Dump	SEAS/COTS	Build 1
PCD File Dump	SEAS/COTS	Build 2
Browse Data File Dump	SEAS/COTS	Build 2
Browse Viewer	SEAS/COTS	Build 2
Metadata File Dump	SEAS/COTS	Build 2
Trouble Data File Dump	SEAS	Build 1
Database Table Dumps	SEAS	Build 1
Shared Memory Dump	SEAS	In Progress

* See Issue

- **Simulation of valid Attitude and Ephemeris Data for WRS Scene identification algorithm verification**
  - **Working with L7 Project personnel to develop capability to transform L5 PCD data into L7 formats**